

Amendment/Response

Reply to Office Action of February 26, 2003

REMARKS/DISCUSSION OF ISSUES

Claims 6-10 are pending in this application, with claim 6 being amended and claims 8-10 added. No new matter is added.

Applicants thank the Examiner for acknowledging the claim for priority and receipt of the certified copies of the priority documents.

The Examiner is respectfully requested to state whether the drawings are acceptable.

Rejections under 35 U.S.C. § 112, 2d paragraph

Claims 6-7 are rejected under 35 U.S.C. § 112, 2d paragraph, as being indefinite. Claim 6 is amended to correct the indefiniteness. Reconsideration of the rejection under 35 U.S.C. § 112, 2d paragraph is respectfully requested.

Rejections under 35 U.S.C. § 103(a)

Claims 6-7 are rejected under U.S.C. § 103(a) as being unpatentable over Okimoto et al. in view of Francois et al. The rejection of the claims, as amended, is respectfully traversed.

Okimoto et al. discloses a magnetic head core piece of CR-based Permalloy with a Cr-oxide coating formed on the surface of the head. Okimoto et al. discloses only a single layer on the magnetic head core. Francois et al. discloses an article with three layers on it, the first of which is stoichiometric in composition, the second is a thin layer of a precious metal such as platinum, palladium, rhodium, silver, iridium, osmium, rhenium, and ruthenium, while the third layer is gold or a high-carat gold layer that is deposited by electroplating.

In contrast, the invention recited in claim 6 has two layers, the first of which consists essentially of Cr, while the second layer consists essentially of Cr_2O_3 . Combining Okimoto et al. with Francois et al. would produce either a single layer (if one of the three layers in Francois et al. replaces the single layer in Okimoto et al.), three layers (if the layer in Okimoto et al. replaces one of the three layers in Francois et al.), or four layers (if the three layers in Francois et al. are

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added to the single layer in Okimoto et al.). In no case does a straight combination of layers of the references produce the two layers required by claim 6.

Taking a close look at the Examiner's proposed combination, that is, using the first layer of Francois et al. as the first layer of claim 6 and the layer of Okimoto et al. as the second layer of claim 6, reveals a deficiency in the Examiner's argument. Specifically, the first layer of Francois et al. is stoichiometric in composition, whereas the first layer of claim 6 consists essentially of Cr. Thus, even making the combination as proposed by the Examiner does not produce the claimed invention.

It is therefore respectfully suggested that the rejection of claim 6 for obviousness has been overcome. Claim 7, being dependent upon and further limiting independent claim 6, should be allowable for that reason as well as for the additional limitations it contains. Applicants respectfully request reconsideration of the rejection of claims 6-7 under U.S.C. § 103(a).

Claims 6-7 are rejected under U.S.C. § 103(a) as being unpatentable over Oshima et al. in view of Francois et al. The rejection of the claims, as amended, is respectfully traversed.

The analysis above applies to this rejection as well. Unlike Okimoto et al., Oshima et al. does disclose two layers. However, both of the layers in Oshima et al. are oxide layers, unlike the present invention. Substituting the first layer of Francois et al. changes the first layer of Oshima et al. to a stoichiometric layer, but still doesn't produce the claimed layer which consists essentially of Cr. Thus, even picking and choosing various elements of the references does not produce the claimed limitations of claim 6.

It is therefore respectfully suggested that the rejection of claim 6 for obviousness has been overcome. Claim 7, being dependent upon and further limiting independent claim 6, should be allowable for that reason as well as for the additional limitations it contains. Applicants respectfully request reconsideration of the rejection of claims 6-7 under U.S.C. § 103(a).

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New claims 8-10 are presented here. Okimoto et al. discloses a chromium oxide layer of not less than 500 nm (0.5 microns). Francois et al. discloses an undercoating with a thickness lying between 100 nm (0.1 microns) and 20,000 nm (20 microns). Oshima et al. discloses a first chromium oxide layer less than approximately 1,000 nm (1 micron) and preferably 10-500 nm (0.01-0.5 μ). Claims 8 and 9 recite that the first layer thickness is between 1 nm and 20 nm, and the second layer thickness is between 10 nm and 100 nm. Claim 10 recites forming a first layer on said head face of a first material which is more sensitive to corrosion than the materials in the head face, and forming a second layer on the first layer at the transducing gap and on both sides thereof of a second material of a wear-resistant material that is more insensitive to corrosion than the first material. These additional features recited in claims 8-10 are taken from the allowed claims of the parent application (now issued) and should adequately distinguish these claims from the cited prior art. Favorable consideration of new claims 8-10 is respectfully requested.

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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